

## CLAIMS

What is claimed is:

- 1       1. A system for transporting compressed gas aboard a ship, the system comprising:
  - 2           a. tanks aboard the ship adapted for carrying the compressed gas,
  - 3           b. a zeolite material in each of the tanks, the zeolite material adapted for
  - 4           adsorption of the gas into pore spaces of the zeolite material; and
  - 5           c. connection means for connecting the tanks to sources for receiving and
  - 6           dispensing the gas.
- 1       2. The system of claim 1 wherein the zeolite material further comprises
- 2       appropriately grained, high porosity, high cation exchange zeolites.
- 1       3. The system of claim 2 wherein the zeolite material is chosen from the group
- 2       consisting of (i) natural unmodified zeolites and (ii) modified zeolites.
- 1       4. The system of claim 1 wherein the zeolite material further comprises clinoptilolite-
- 2       rich zeolites.
- 1       5. The system of claim 1 wherein the compressed gas is natural gas.

1        6. A system for transporting compressed gas aboard a ship, the system comprising:

2            a. tanks aboard the ship adapted for carrying the compressed gas,

3            b. a zeolite material in each of the tanks, the zeolite material adapted for  
4            adsorption of the gas into, and desorption from, pore spaces of the zeolite  
5            material; and

6            c. connection means for connecting the tanks to sources for receiving and  
7            dispensing the gas.

1        7. The system of claim 6 wherein the zeolite material further comprises  
2        appropriately grained, high porosity, high cation exchange zeolites.

1        8. The system of claim 7 wherein the zeolite material is chosen from the group  
2        consisting of (i) natural unmodified zeolites and (ii) modified zeolites.

1        9. The system of claim 8 wherein the zeolite material further comprises clinoptilolite-  
2        rich zeolites.

1        10. The system of claim 9 wherein the compressed gas is natural gas.

1 11. A method for transportation of natural gas aboard a ship, the method comprising

2 the steps of:

- 3 a. providing a plurality of tanks on board the ship;
- 4 b. putting a zeolite material in the tanks;
- 5 c. connecting gas delivery tubes to the tanks;
- 6 d. introducing the gas into the tanks under pressure until a desired pressure
- 7 is reached;
- 8 e. disconnecting the gas delivery tubes to the tanks, and allowing the ship to
- 9 embark to its desired destination; and
- 10 f. after the ship reaches its desired destination, connecting gas delivery
- 11 tubes to the tanks, and discharging the gas from the tanks.

1 12. The method of claim 11, before the second step of putting a zeolite material in  
2 the tanks, further comprising the following steps:

- 3 a. graining the zeolite material;
- 4 b. modifying the zeolite material with an appropriate mole-ratio of
- 5 hydrochloric acid;
- 6 c. dehumidifying the zeolite material; and
- 7 d. sieving the zeolite material.

1 13. A system for transportation of natural gas aboard a ship, comprising:

- 2 a. means for storing a zeolite material on board the ship;
- 3 b. means for putting the zeolite material in the means for storing;
- 4 c. means for connecting first gas delivery tubes to the means for storing;
- 5 d. means for introducing the natural gas through the gas delivery tubes into
- 6 the means for storing under pressure until a desired pressure is reached;
- 7 e. means for disconnecting the gas delivery tubes from the tanks, and
- 8 allowing the ship to embark to its desired destination; and
- 9 f. means for connecting second gas delivery tubes to the means for storing,
- 10 and discharging the natural gas from the means for storing.

1 14. The system of claim 13, further comprising:

- 2 a. means for graining the zeolite material;
- 3 b. means for modifying the zeolite material with an appropriate mole-ratio of
- 4 hydrochloric acid;
- 5 c. means for dehumidifying the zeolite material; and
- 6 d. means for sieving the zeolite material.
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